

## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

#3

Applicant: Hard, Robert A.  
 Ser. No.: 08/623,852  
 Fil. Date: March 26, 1996  
 For: PROCESS FOR RECOVERING METAL VALUES  
 Examiner: Unknown  
 Art Unit: Unknown

HONORABLE COMMISSIONER OF PATENTS  
 AND TRADEMARKS  
 Washington, DC 20231

FORM PTO-1449  
 INFORMATION DISCLOSURE STATEMENT BY APPLICANT(S)

## U.S. PATENT DOCUMENTS

Examiner Initial	Patent Number	Date	Name	Class/Subclass	Filing Date	Enclosed
<u>SJB</u>	2,962,372	Nov. 29, 1960	Foos et al.	75-121	Jan. 17, 1958	Yes
<u>SJB</u>	3,658,511	Apr. 25, 1972	Gustison	<del>G22B-51/00</del>	Dec. 22, 1969	Yes
<u>SJB</u>	4,164,417	Aug. 14, 1979	Gustison	<del>G22B-34/24;</del> <del>G22C-27/02</del>	Apr. 28, 1978	Yes
<u>SJB</u>	4,309,389	Jan. 5, 1982	Meyer	<del>G01G-33/00;</del> <del>G01G-35/00</del>	Jul. 1, 1980	Yes
<u>SJB</u>	4,446,116	May 1, 1984	Krismer et al.	<del>G22B-34/24;</del> <del>G22B-60/02</del>	Mar. 24, 1982	Yes
<u>SJB</u>	4,451,438	May 29, 1984	Floeter et al.	<del>G01G-43/00;</del> <del>G01G-33/00;</del> <del>G01G-35/00;</del> <del>G01F-15/00</del>	Sep. 29, 1982	Yes
<u>SJB</u>	4,654,200	Mar. 31, 1987	Nirdosh et al.	<del>G01F-13/00;</del> <del>G01F-15/00</del>	Jun. 1, 1984	Yes
<u>SJB</u>	4,663,130	May 5, 1987	Bergman et al.	<del>G01G-31/00</del>	Nov. 14, 1983	Yes
<u>SJB</u>	4,673,554	Jun. 16, 1987	Niwa et al.	<del>G01G-35/00</del>	Dec. 13, 1985	Yes
<u>SJB</u>	4,695,290	Sep. 22, 1987	Kindig et al.	<del>G10L-9/02;</del> <del>G10L-9/06</del>	Jun. 24, 1985	Yes
<u>SJB</u>	4,743,271	May 10, 1988	Kindig et al.	<del>G10L-9/02;</del> <del>G10L-9/06</del>	May 2, 1984	Yes
<u>SJB</u>	4,753,033	Jun. 28, 1988	Kindig	<del>G10L-9/00</del>	Feb. 5, 1987	Yes
<u>SJB</u>	5,023,059	Jun. 11, 1991	Bielecki et al.	<del>B01D-11/00</del>	Nov. 2, 1988	Yes
<u>SJB</u>	5,209,910	May 11, 1993	Bludssus et al.	<del>G22B-34/20;</del> <del>G01G-33/00;</del> <del>G01G-35/00</del>	Jun. 24, 1991	Yes
<u>SJB</u>	5,273,725	Dec. 28, 1993	Carlson	<del>G01G-50/00</del>	May 29, 1992	Yes
<u>SJB</u>	5,384,105	Jan. 24, 1995	Carlson	<del>G01G-33/00</del>	Nov. 15, 1993	Yes

Examiner Initial	Patent Number	Date	Name	Class/ Subclass	Filing Date	Enclosed
<u>SJB</u>	5,437,848	Aug. 1, 1995	Hard	<del>C01G 56/00</del> <del>C01G 57/00</del>	Jul. 10, 1992	Yes

## FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class/ Subclass	Translation Yes No	Enclosed
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## OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages, Etc.)

Examiner Initial	Document	Enclosed
<u>SJB</u>	1. Solvent Extraction Principles and Applications to Process Metallurgy, Part II, <i>no date.</i>	Yes
<u>SJB</u>	2. Radioactive Waste Disposal in the Shiprock-Type Uranium Milling Flowsheet by K.E. Tame, E.G. Valdez, and J.B. Rosenbaum, <i>no date.</i>	Yes
<u>SJB</u>	3. Radium Removal from Uranium Ores and Mill Tailings by S.R. Borrowman and P.T. Brooks, <i>no date.</i>	Yes
<u>SJB</u>	4. The Purification of Inorganic Acids by the Amine Liquid Ion Exchange Process by D.W. Agers, J.E. House, J.L. Drobnick and C.J. Lewis, <i>no date.</i>	Yes
<u>SJB</u>	5. Scandium Recovery From a Tantalum Waste Residue: A Status Report by D.D. Harbuck and G.R. Palmer, U.S. Bureau of Mines, <i>1991, no month.</i>	Yes
<u>SJB</u>	6. Evaluation of Scandium Oxide Production from Tantalum Processing Waste, August, 1993, edited by G. Kyle Green.	Yes
<u>SJB</u>	7. <u>Scandium Saves Aluminum</u> , Rare-earth Information Center Insight, Ames Laboratory Institute for Physical Research and Technology, Vol. 6, No. 4, April 1, 1993.	Yes
<u>SJB</u>	8. <u>Co-extraction of uranium and thorium</u> , by G.M. Ritcey and B.H. Lucas, April, 1972, Journal of Metals, pages 39-44.	Yes

EXAMINER

DATE CONSIDERED

Steve Bor9-16-96

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

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**U.S. PATENT DOCUMENTS**

Examiner Initial	Patent Number	Date	Name	Class/ Subclass	Filing Date	Enclosed
<u>SJB</u>	2,767,047	Oct. 16, 1956	Wilhelm et al.	23-23	Oct. 20, 1953	Yes
<u>SJB</u>	3,117,833	Jan. 14, 1964	Pierret	23-19	Sept. 25, 1958	Yes
<u>SJB</u>	3,712,939	Jan. 23, 1973	Capps et al.	<del>G22B-59/00</del>	Mar. 29, 1971	Yes
<u>SJB</u>	4,234,555	Nov. 18, 1980	Pulley et al.	<del>G24F-9/12;</del> <del>G02F-1/62</del>	Jun. 9, 1978	Yes
<u>SJB</u>	4,155,982	May 22, 1979	Hunkin et al.	<del>G01G-43/00</del>	Oct. 9, 1974	Yes
<u>SJB</u>	4,233,278	Nov. 11, 1980	Korchnak	<del>G01B-25/22</del>	Mar. 24, 1978	Yes
<u>SJB</u>	4,278,640	Jul. 14, 1981	Allen et al.	<del>G01B-25/234</del>	Mar. 19, 1979	Yes
<u>SJB</u>	4,293,528	Oct. 6, 1981	Paul	<del>G01G-43/01</del>	Nov. 19, 1979	Yes
<u>SJB</u>	4,320,093	Mar. 16, 1982	Volesky et al.	<del>G01G-43/00</del>	Nov. 13, 1979	Yes
<u>SJB</u>	4,412,861	Nov. 1, 1983	Kreuzmann	<del>G22B-60/02</del>	Oct. 27, 1982	Yes
<u>SJB</u>	4,446,115	May 1, 1984	Endo et al.	<del>G01G-35/00</del>	Mar. 2, 1982	Yes
<u>SJB</u>	4,477,416	Oct. 16, 1984	Goddard	<del>G01G-31/00;</del> <del>G01G-31/02</del>	Sep. 27, 1982	Yes
<u>SJB</u>	4,536,034	Aug. 20, 1985	Otto, Jr. et al.	<del>E24B-43/28</del>	Apr. 14, 1983	Yes
<u>SJB</u>	4,778,663	Oct. 18, 1988	Rickelton	<del>G01G-43/00</del>	Aug. 27, 1987	Yes
<u>SJB</u>	4,923,507	May 8, 1990	Silva, Filho	<del>G22B-1/00</del>	May 19, 1988	Yes

**FOREIGN PATENT DOCUMENTS**

Examiner Initial	Document Number	Date	Country	Class/ Subclass	Translation Yes No	Enclosed
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OTHER DOCUMENTS EXPRESS MAIL NO. Em167730021  
(Including Author, Title, Date, Pertinent Pages, Etc.)

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